Here are the 10 questions to ask before you purchase an alternative refrigerant:

1. Is the refrigerant on the Environmental Protection Agency's SNAP (Significant New Alternatives Policy) Program list of acceptable substitutes, and therefore legal to use as a substitute for a CFC refrigerant? If so, are there any restrictions on how the refrigerant can be used? For the SNAP fact sheet on alternative refrigerants and lists of refrigerants accepted under SNAP, call the hot-line at 1-800-296-1996.

2. How much will the alternative refrigerant cost? Many manufacturers and distributors of alternative refrigerants may point out how much less expensive their product is than the refrigerant it is substituting for. Potential purchasers, however, should compare the cost of the product with the cost of other substitutes. For example, if you are considering purchasing a blend refrigerant that substitutes for CFC-12, consider its cost relative to the cost of HFC-134a, which is generally considerably less expensive than blend refrigerants.

3. What does the system manufacturer have to say about this refrigerant and whether it is compatible with system components? Will using a particular refrigerant void any warranties on the system the refrigerant is used in? Because of the wide range in equipment types and designs, EPA does not issue retrofit procedures. The best source of information on how a given substitute will perform in a system is the manufacturer of the system and its components. In addition to questions about the alternative's performance in a particular end use, you should determine whether charging a system with a new refrigerant will void any warranty. Many component manufactures have stated that their warranties will be voided if any refrigerant other than R-12 or R-134a is charged into the system.

4. What recycling and/or reclamation standards apply to the refrigerant? Can the refrigerant be recycled or reclaimed to those standards? You can call the hot-line number listed to determine the status of EPA standards and requirements. Note that currently, there is no way to recycle blend refrigerants on-site at an automotive facility, so that used blend refrigerants must be sent off-site for reclamation or incineration.

5. What equipment must be used with the alternative refrigerant? Equipment that is used by a facility to service R-12 or R-134a A/C systems may not be used to charge, recover, or recharge a blend refrigerant. Technicians must therefore dedicate newly purchased equipment to that blend. Alternatively, a shop may convert a piece of R-12 or R-134a equipment for permanent use with the blend refrigerant.

6. Has the alternative refrigerant been evaluated by ARI (the Air-Conditioning and Refrigeration Institute)? If an alternative is to be reclaimed, will it be reclaimed to ARI's 700 standard? If not, then how will the purity of the reclaimed alternative refrigerant be assured? ARI, an A/C and refrigeration manufacturers' trade association, develops standards for the industry. ARI's 700 standard specifies acceptable levels of refrigerant purity for fluorocarbon refrigerants including R-12, R-222, R-134a, R-500, and R-502 and for certain refrigerant blends. The purpose of the 700 standard is to enable users to evaluate and accept or reject refrigerants, whether virgin, reclaimed or repackaged. Reclamation of these refrigerants in both the motor vehicle and stationary/commercial sectors must follow the 700 standard.

7. Is the alternative refrigerant flammable? Both ASHRAE (the American Society of Heating, Refrigerating and Air-Conditioning Engineers) and EPA evaluate refrigerant flammability. As part of its SNAP review, EPA requires that a new refrigerant be tested according to the American Society of Testing Materials (ASTM) E-681 testing method. E-681 is used to determine the concentrations in air at which a substance is flammable, at normal atmospheric pressure. In addition to testing the refrigerant itself, if a blend contains a flammable component, EPA requires leak testing to ensure that the composition does not change and become flammable. EPA prohibits the use of any flammable CFC-12 substitutes in motor vehicle A/C's. If a substitute is flammable, EPA requires a comprehensive risk assessment for each proposed end-use. This risk assessment estimates the likelihood of fire and the potential results if a fire were to occur, in addition to suggesting measures to mitigate this risk. State governments, fire marshals, building code organizations, and other local authorities may have issued prohibitions or other regulations related to flammable refrigerants. Check with them before buying, selling, or using a flammable refrigerant.

8. Is the refrigerant readily and widely available? If an automotive service technician charges a system with an alternative refrigerant that later becomes unavailable, or that is not available nationwide, then at the next servicing, the system may have to be retrofitted to another appropriate substitute. The customer may be unwilling to pay for the retrofit, or may be unhappy that his vehicle cannot be otherwise serviced at the facility he chooses.

9. What is my liability if I sell an alternative not yet listed as acceptable by EPA or if I put it in a customer's system? Under EPA regulations, a refrigerant manufacturer must submit information on a new refrigerant for SNAP review at least 90 days before marketing the product. This 90-day period is required by Section 612 of the Clean Air Act, but the Act did not prohibit sale and use of that refrigerant after the 90-day period. Thus, if the Agency is still engaged in its review when the 90 days elapses, the product can be sold and used, even though it is not "EPA acceptable."

10. Are any alternative refrigerants more environmentally beneficial than others? HFC-134a does not contain chlorine and therefore does not contribute to ozone depletion, although like other HFCs, it contributes to global warming. HCFC-22 and all other HCFCs contribute to both ozone depletion and global warming. All blend refrigerants listed as acceptable for motor vehicle use contain HCFCs.